



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/754,560	01/12/2004	Tsukasa Kuboshima	2018-828	8222
23117	7590	12/28/2005	EXAMINER	
NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203			TRAN, BINH Q	
			ART UNIT	PAPER NUMBER
			3748	
DATE MAILED: 12/28/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Tah

Office Action Summary

Application No.

10/754,560

Applicant(s)

KUBOSHIMA ET AL.

Examiner

BINH Q. TRAN

Art Unit

3748

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This office action is in response to the amendment filed September 30, 2005.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-8 are rejected under 35 U.S.C. 102 (e) as being anticipated by Hirota et al. (Hirota) (Patent Number 6,568,178).

Regarding claims 1, and 7-8, Hirota discloses exhaust gas purification system (18) of an internal combustion engine (1), the exhaust gas purification system comprising: an exhaust gas after-treatment device (70), which is disposed in an exhaust passage of the engine and supports a

Art Unit: 3748

catalyst; temperature sensing means (77, 79) for estimating temperature of the exhaust gas after-treatment device (70); and a regeneration system (e.g. See Figs. 18-36) for regenerating the exhaust gas after treatment device; wherein the regeneration system comprises: hydrocarbon supplying means (e.g. 6, 25, 74) for supplying hydrocarbon to the exhaust gas after-treatment device (e.g. See col. 13, lines 3-21); and hydrocarbon supply quantity controlling means (30) for determining an upper limit value of the permissible quantity of the hydrocarbon supplied to the exhaust gas after-treatment device in accordance with the temperature of the exhaust gas after-treatment device estimated by the temperature sensing means, and for controlling the hydrocarbon supplying means so that the quantity of the hydrocarbon supplied to the exhaust gas after-treatment device becomes equal to or less than the upper limit value (e.g. See Figs. 18-36; col. 18, lines 30-67; col. 19, lines 1-51; cols. 24-27, lines 1-67).

Regarding claim 2, Hirota further discloses that the hydrocarbon supplying means (e.g. 6, 25, 74) supplies the hydrocarbon to the exhaust gas after-treatment device by performing a post injection of fuel after a main injection of the fuel, by retarding injection timing of the fuel, or by increasing a quantity of the exhaust gas recirculated into intake air (e.g. See cols. 23-27, lines 1-67).

Regarding claim 3, Hirota further discloses hydrocarbon quantity sensing means (21) for sensing the quantity of the hydrocarbon supplied to the exhaust gas after-treatment device, wherein the hydrocarbon supply quantity controlling means controls the hydrocarbon supplying means so that the quantity of the hydrocarbon sensed by the hydrocarbon quantity sensing means becomes equal to or less than the upper limit value (e.g. See col. 5, lines 1-67; col. 6, lines 1-16).

Regarding claim 4, Hirota further discloses that the hydrocarbon quantity sensing means (21) calculates the quantity of the hydrocarbon supplied to the exhaust gas after-treatment device by adding a quantity of unburned hydrocarbon generated through combustion in the engine to the quantity of the hydrocarbon supplied by the hydrocarbon supplying means (e.g. See col. 5, lines 1-67; col. 6, lines 1-16).

Regarding claim 5, Hirota further discloses that the temperature sensing means (77, 79) senses temperature of the exhaust gas upstream of the exhaust gas after-treatment device as the temperature of the exhaust gas after-treatment device (e.g. See Figs. 18-36; col. 18, lines 30-67; col. 19, lines 1-51; cols. 24-27, lines 1-67).

Regarding claim 6, Hirota further discloses that the exhaust gas after-treatment device includes at least one selected from the group of a diesel particulate filter having an oxidation catalyst, a nitrogen oxide removal catalyst, an oxidation catalyst and a three-way catalyst (e.g. See Figs. 18-36; col. 18, lines 30-67; col. 19, lines 1-51; cols. 24-27, lines 1-67).

Response to Arguments

Applicant's arguments filed September 30, 2005 have been fully considered but they are not completely persuasive. Claims 1-8 are pending.

Applicant's arguments with respect to claims 1-8 have been considered but are moot in view of the new ground(s) of rejection as discussed above.

Applicant's amendment (Claims 1-8) necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL See MPEP, 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for response to this final action is set to expire THREE MONTHS from the date of this action. In the event a first response is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event will the statutory period for response expire later than SIX MONTHS from the date of this final action.

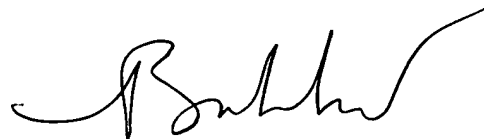
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Binh Tran whose telephone number is (571) 272-4865. The examiner can normally be reached on Monday-Friday from 8:00 a.m. to 4:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion, can be reach on (571) 272-4859. The fax phone numbers for the organization where this application or proceeding is assigned are (571) 273-8300 for regular communications and for After Final communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BT
December 22, 2005



Binh Q. Tran
Patent Examiner
Art Unit 3748